

## Substance Use among Professional College Students of Sullia Taluk, Dakshina Kannada

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### ABSTRACT

**Introduction:** Numerous published reports state that the professional college students are heavy users and abusers of drugs and alcohol. The everyday pressure of academics with an obligation to succeed, an uncertain future and difficulties of integrating into the system, urge students to indulge in habits like smoking, alcohol, caffeine and psychedelic drugs. The widespread use of drugs for recreational purposes and the changing patterns of drug use in society at large impede our ability to know the actual extent to which students use and abuse drugs and alcohol.

**Methodology:** A questionnaire study was conducted using modified ASSIST in five professional colleges of Sullia Taluk which provide undergraduate and postgraduate training of five and three years respectively. With prior permission of the authorities of the included institutes, students were approached and included students were surveyed and Questionnaires were handed out to students in a classroom.

**Results:** The mean age of the study sample was 21.4±2.3 years, the study showed nearly 100% prevalence of substance use in one or the form. Non- alcoholic beverages (caffeine) were the most commonly used reported by 96.4% of the studied population. The other substances used in order of magnitude were alcohol -21.4% and tobacco smoking -20.5%.

**Conclusion:** The study indicated 100% prevalence of one or the other form of substance use. Students affiliated to allopathic sciences were more involved in substance use. With the advancement of each academic year the rate of substance use showed an increase.

**Public health significance:** Substance use is an issue of public health significance as it affects the younger generation who indulge in habits at young age which affects their overall personality development.

**Keywords:** Prevalence, Substance, Alcohol, Tobacco smoking, Health sciences, Students

### INTRODUCTION

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs [1]. Psychoactive substance use can lead to dependence syndrome - a cluster of behavioral, cognitive and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance and sometimes a physical withdrawal state [2]. People abuse substances such as drugs, alcohol, and tobacco for varied and complicated reasons, but it is clear that our society pays a significant cost. The toll for this abuse can be seen in hospitals and emergency departments through direct damage to health by substance abuse and its link to physical trauma. Jails and prisons tally daily the strong connection between crime and drug dependence and abuse. Although use of some drugs such as cocaine has declined, use of other drugs such as heroin and "club drugs" has increased. Abused

substances produce some form of intoxication that alters judgment, perception, attention or physical control [3].

According to the numerous published reports, the perception that professional college students are heavy users and abusers of drugs and alcohol persists within the community. The everyday pressure of academics with an obligation to succeed, an uncertain future and difficulties of integrating into the system, urge students to indulge in habits like

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consumption of alcohol, cigarettes, psychedelic drugs or the lesser harmful coffee. Or it could be for recreational purpose.

Smoking among health care personnel such as medical students is an important public health issue [4]. More effective measures to reduce tobacco smoking among medical students are needed worldwide. A recent study in Kerala showed that substantial proportion of physicians and medical students continue to smoke. Alcohol consumption is a major public health problem in most parts of the world. Alcohol remains one of the widely used drugs among college students. Earlier initiation of alcohol has been reported to be associated with increased risk for alcohol related problems.

Non-medical use of drugs among students has been investigated in many countries, but the data from India is lacking or limited. Furthermore, general data on consumption of coffee, tobacco, alcohol and drugs of non-medical use in the general population are also very scarce in our country. Data on tobacco consumption are only obtainable from figures of production, and so are those for alcohol [5]. The only information on the use of psychedelic and other addictive drugs is public notes from the police and an annual report from the Supreme Court.

In the more general setting of a study of the epidemiology of drug abuse in the general population in India, it was decided to begin with a survey of the substance abuse among students of professional colleges in Sullia Taluk of Dakshina Kannada district, Karnataka [6,7].

## METHODOLOGY

A questionnaire survey was conducted using modified Alcohol, Smoking and Substance Involvement Screening

Test (ASSIST), after obtaining ethical clearance from Institutional Ethics committee - KVG Dental College and Hospital Sullia, in five professional colleges in Sullia Taluk of Dakshina Kannada district providing undergraduate and postgraduate training of five and three years, respectively. With prior permission of the authorities of the included institutes, students were approached by the investigator herself. All candidates were invited to participate in the survey and those with consent were handed the survey forms. Students who were absent on the day of the survey and those under psychiatric medication were excluded [8-13].

Sample size was accounted to 750 after adding 10% of the sample size to compensate for the sampling loss. Descriptive data was recorded; percentage distribution, chi-square and Fischer exact test were conducted using R commander to test significance of the findings with p value set at  $\leq 0.05$  [14-19].

## RESULTS

Nine hundred and eighty two students were approached for the study. Nearly 200 students refused to participate citing various reasons like lack of time, disinterest and reluctance to participate in the survey. The response rate was 79.63%. The 782 participants with consent were handed out with questionnaire in a classroom and the duration given was 10 minutes to complete the form. A total of 750 questionnaires were analysed after excluding 32 incomplete forms [20,21].

The mean age of the study sample was  $21.4 \pm 2.3$  years, with 57.6% male students and 43.4% female students. Basic demographic details of the study population are described in **Table 1**.

**Table 1.** Basic demographic characteristics of the study population.

S. No.	Demography	N
1	<b>Age</b>	
	17-19	247
	20-22	346
	23-25	108
2	26-29	49
	<b>Gender</b>	
2	Male	432
	Female	318
3	<b>Streams</b>	
	Ayurveda	132
	Dental	239
	Engineering	173
	Law	73
4	Medical	133
	<b>Qualification</b>	
	Undergraduates	701
	Postgraduates	49

The study showed nearly 100% prevalence of substance use in one or the form. Non-alcoholic beverages (caffeine) were the most commonly used reported by 96.4% of the studied

population. The other substances used in order of magnitude were alcohol -21.4% and tobacco smoking -20.5% as described in **Table 2**.

**Table 2.** Overall prevalence of substances used among the study population.

Coffee/tea	96.4%
Alcohol	21.4%
Smoking	20.5%
Psychedelic drugs	1.9%
Inhalants	1.3%

Substance use in relation to the demographic details of the study population is described in the **Table 3**.

**Table 3a.** Substance use in relation to age of study population.

Substances	Age (years)				p-value
	17-19	20-22	23-25	26-29	
Tobacco	14.2	19.9	27.7	28.6	0.00
Alcohol	15.4	22.5	28.7	28.6	0.00
Coffee/tea	96.5	95.7	97.2	95.9	0.70
Inhalants	0.8	1.7	0.9	2	0.80
Psychedelic drugs	0	0	9.3	8.2	0.15

**Table 3b.** Substance use in relation to gender of study population.

Substances	Gender		p-value
	Male	Female	
Tobacco	34.9	0.9	0.00
Alcohol	35.2	2.8	0.00
Coffee/tea	95.6	97.7	0.76
Inhalants	2.2	0.5	0.12
Psychedelic drugs	3.9	0	0.38

**Table 3c.** Substance use in relation to qualification of study population.

Substances	Qualification		p-value
	UG	PG	
Tobacco	9.3	17.2	0.00
Alcohol	13.1	21	0.00
Coffee/tea	96.6	93.6	0.70
Inhalants	1.1	0.5	0.23
Psychedelic drugs	1.5	3.1	0.33

**Table 3d.** Substance use in relation to streams of study population.

Substances	Streams					p-value
	Ayurveda	Dental	Engineering	Law	Medical	
Tobacco	7.5	21.3	21.9	19.2	18.1	0.36
Alcohol	8.3	22.1	23.2	19.7	19.4	0.40
Coffee/tea	94.6	95.8	95.9	98.6	97.7	0.71
Inhalants	0	0.8	4	0	0.7	0.15
Psychedelic drugs	0	2	3.4	0	2.2	0.20

\*values depicted in percentage

**DISCUSSION**

Use of substances such as alcohol and tobacco has become one of the rising major public health and socio-economic problems worldwide [22,23]. Recent trends indicate that the use of substances have dramatically increased particularly in developing countries. Alcohol, especially in high doses, or when combined tobacco, continues to claim the lives of many people [24-26]. It is estimated that 9% of the global population aged 12 or older are classified with dependence on psychoactive substances such as alcohol [27].

The problem of substance use has historically been linked to health professionals due to their close proximity to the drugs. This problem highly impairs the practice of medicine with reasonable skill and safety to patients because of their

illness or dependence on drugs [23]. Tobacco consumption has been the main risk factor for chronic diseases such as cancers, chronic lung disease, diabetes and cardiovascular diseases, however; its use has become a growing concern among college students in many parts of the world [24]. Furthermore, the use of drugs and alcohol among medical students has become a growing concern. Studies also suggest differentials in alcohol and other drug use between adolescents and young adults with regard to sexual identity among undergraduate students [26].

The use of alcohol, tobacco among adolescents can be harmful, leading to decreased academic performance, increased risk of contracting HIV and other sexually transmitted diseases, or other psychiatric disorders such as lethargy, hopelessness and insomnia [27]. Furthermore, it

exposes students to legal repercussions or jeopardizes their enrolment at the university. Substance use behaviors among medical students have important implications for the health of the general population since physicians and future physicians are important role models in terms of health related behaviors [21,28].

This study clearly indicates the concern of substance use among the professional college students. Nearly 100% prevalence of substance use in one or the other form was observed among the study population and consumption of caffeine in the form of coffee or tea was found to be the highest (96.7%), followed by alcohol (21.4%). The alcohol prevalence is closer to that reported by Deressa et al. (22%) [10] WHO's Global Information System on Alcohol and Health reported past alcohol use in India is between 0.4-19% [29]. The prevalence of smoking in this study was reported to be 20.5% while a similar study by Ganesh et al. [13] reported 22.4%, while a study by Anjali et al. [3] reported the smoking prevalence as little as 4.5%. According to the data from WHO's Report on the Global Tobacco Epidemic 2013, the prevalence of current tobacco use in India is between 12.1-19.8%. Alcohol and smoking was the most common combination of substances used by the subjects (19.86%) followed by the combination of caffeine and smoking (7.4%) [27,28]. The percentage of substance use was observed more among males than females similar to a study reported by Naskar et al. [21]. These differences might partly represent sex differences in the opportunities to use substances, in which men have greater opportunities to try substances than women do. WHO's World mental health survey reported large variations between countries in sex differences in the opportunity to use drugs and in progression to use [20]. In some countries, differences between sexes were small at both stages (particularly for alcohol) whereas in other countries they were apparent at both stages; and in the remainder, men had a much higher chance of being offered substances (particularly illicit drugs) than women, accounting for sex differences in use [24]. In no country were alcohol or drugs more available for women or were women more likely than men to take up the opportunity to use substances [25,29].

Although statistically insignificant 1.3% of the study population reported the use of inhalants and 1.9% reported the use of Psychedelic drugs at least once in their lifetime. While the UN Office on Drugs and Crime's 2015 World Drug Report has no data reported on the use of psychedelics (cannabis and cocaine) [30]. It is admirable that 19.2% of the study population has tried quitting the habit of smoking and alcohol in the past three months and however only 9.2% reported that they have successfully tried and quit the habit.

A limitation of this study included the use of self-reported data, which can lead to inaccurate information and a high risk of response bias. Under reporting continues to be an important confounder however it must be accepted. A

detailed interview and assessment of substance dependence is recommended for the further studies [31].

## CONCLUSION

Substance use is an issue of public health importance as it affects the younger generation who indulge in habits at young age which affects their overall personality development. We health professionals have a key role in educating community as patients expect information, help and guidance from us on a number of health-related matters thus we become the primary focus of implementing healthier lifestyle in the community.

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